

FIG. 1A	FIG. 1B
FIG. 1C	FIG. 1D

FIG. 1

FIG. 1A

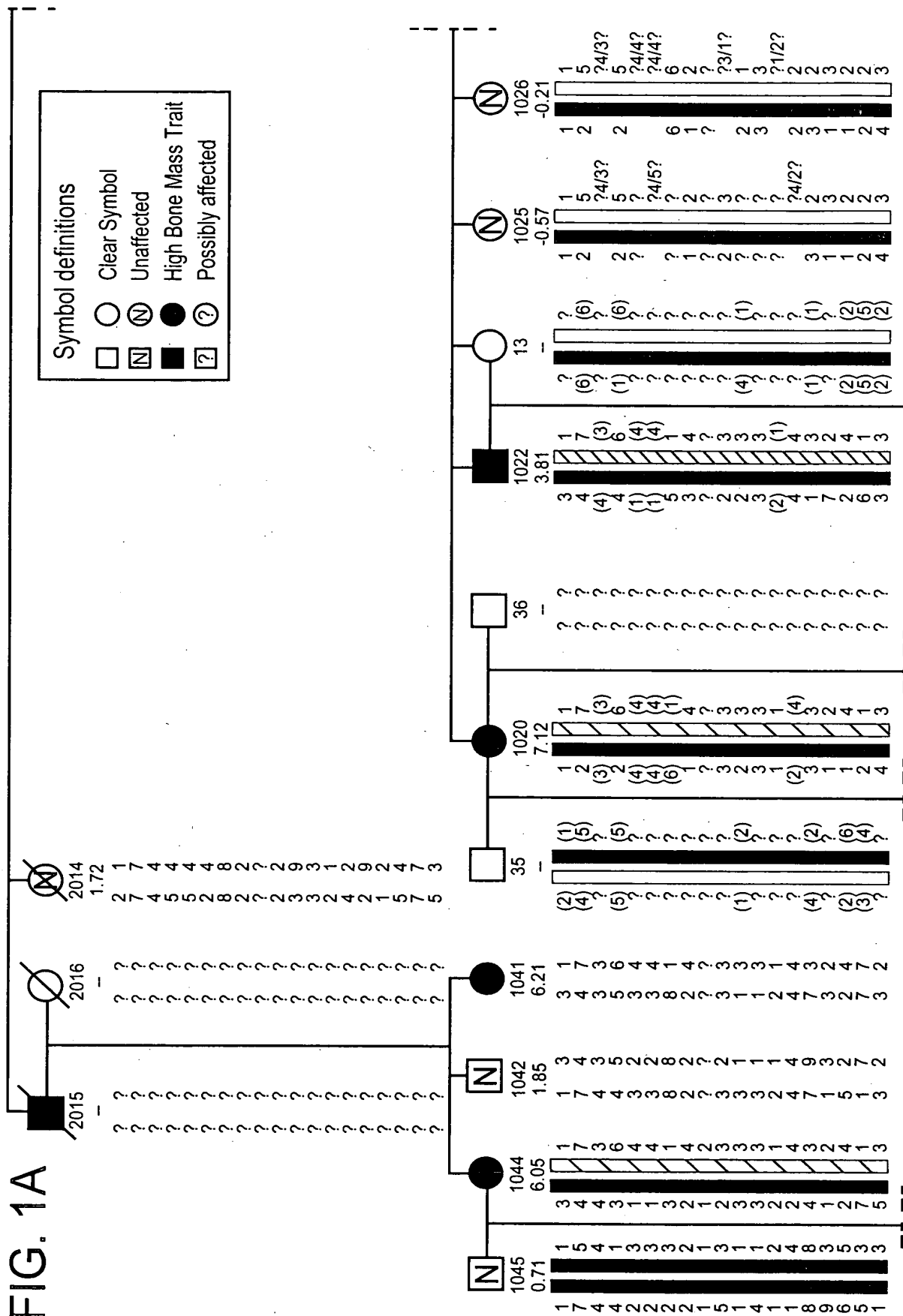
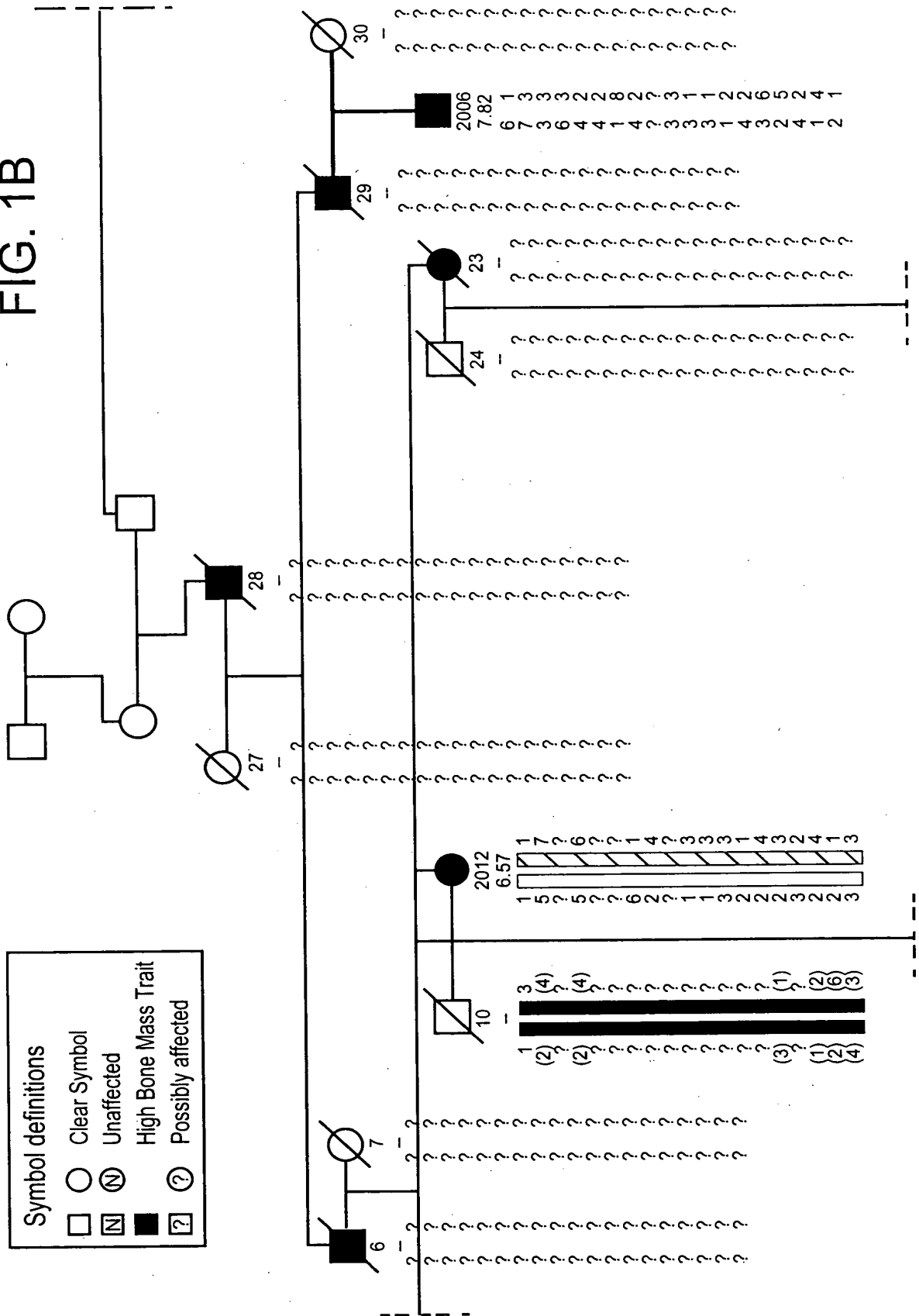
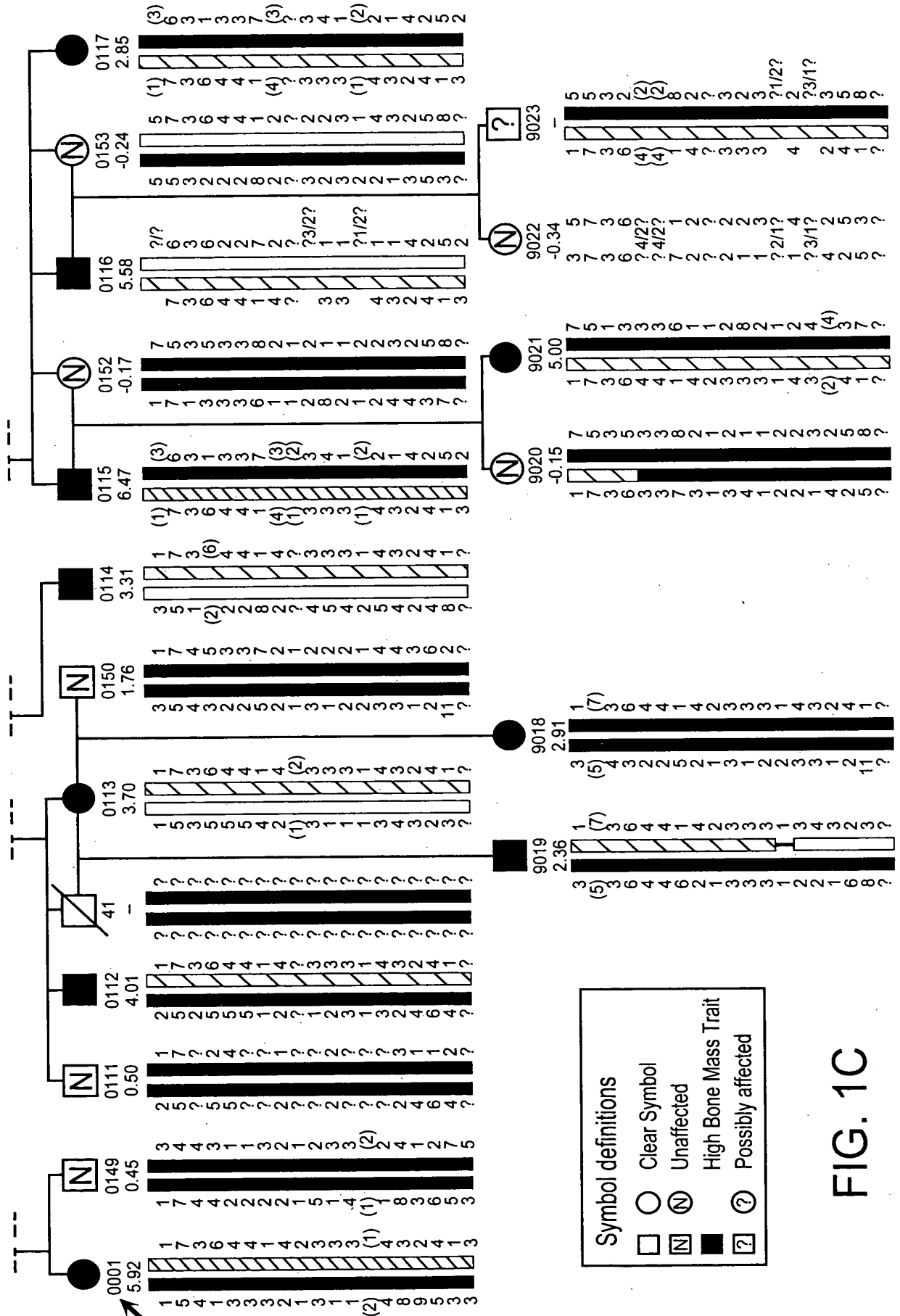
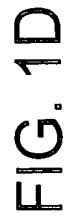


FIG. 1B







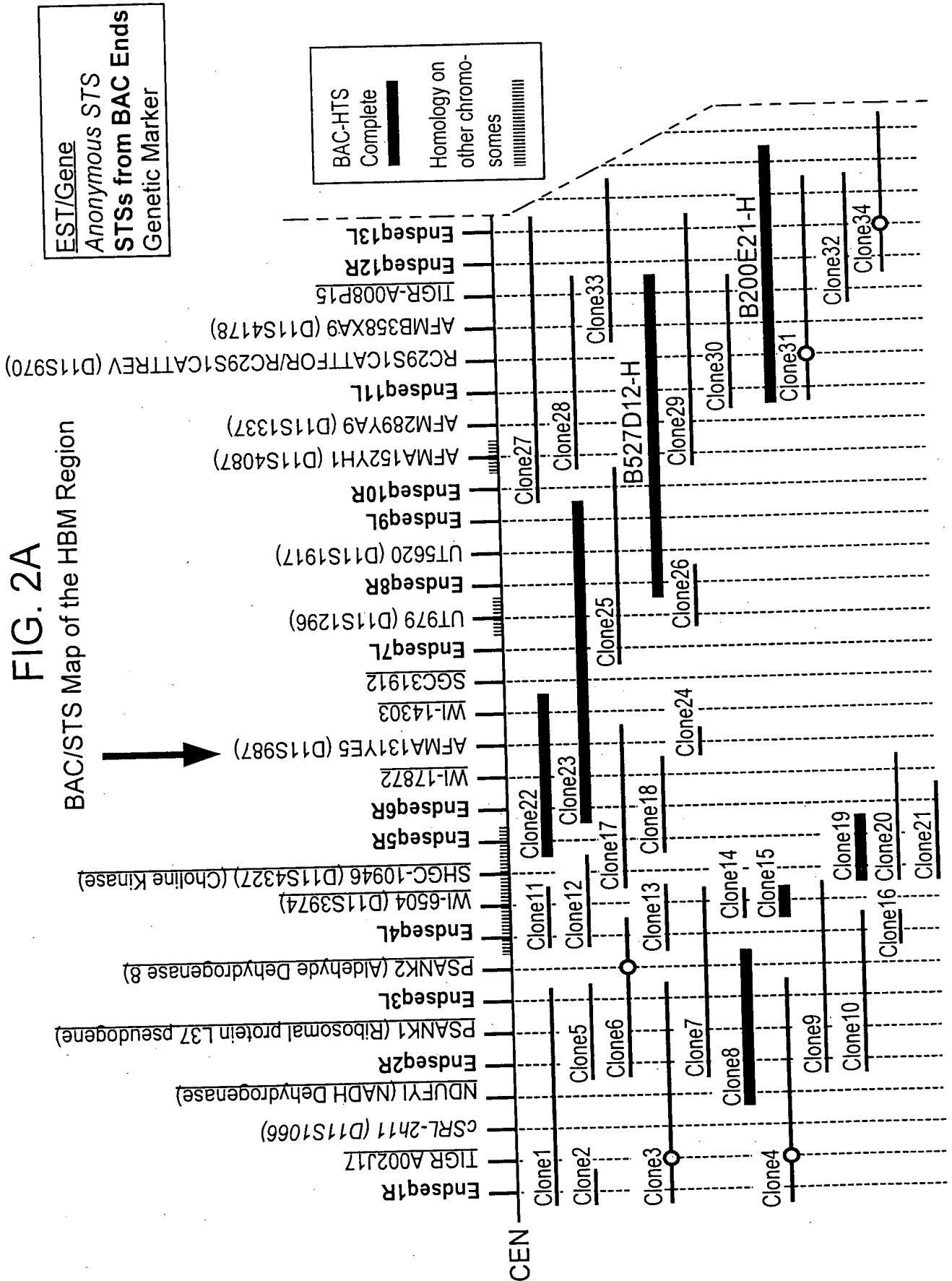
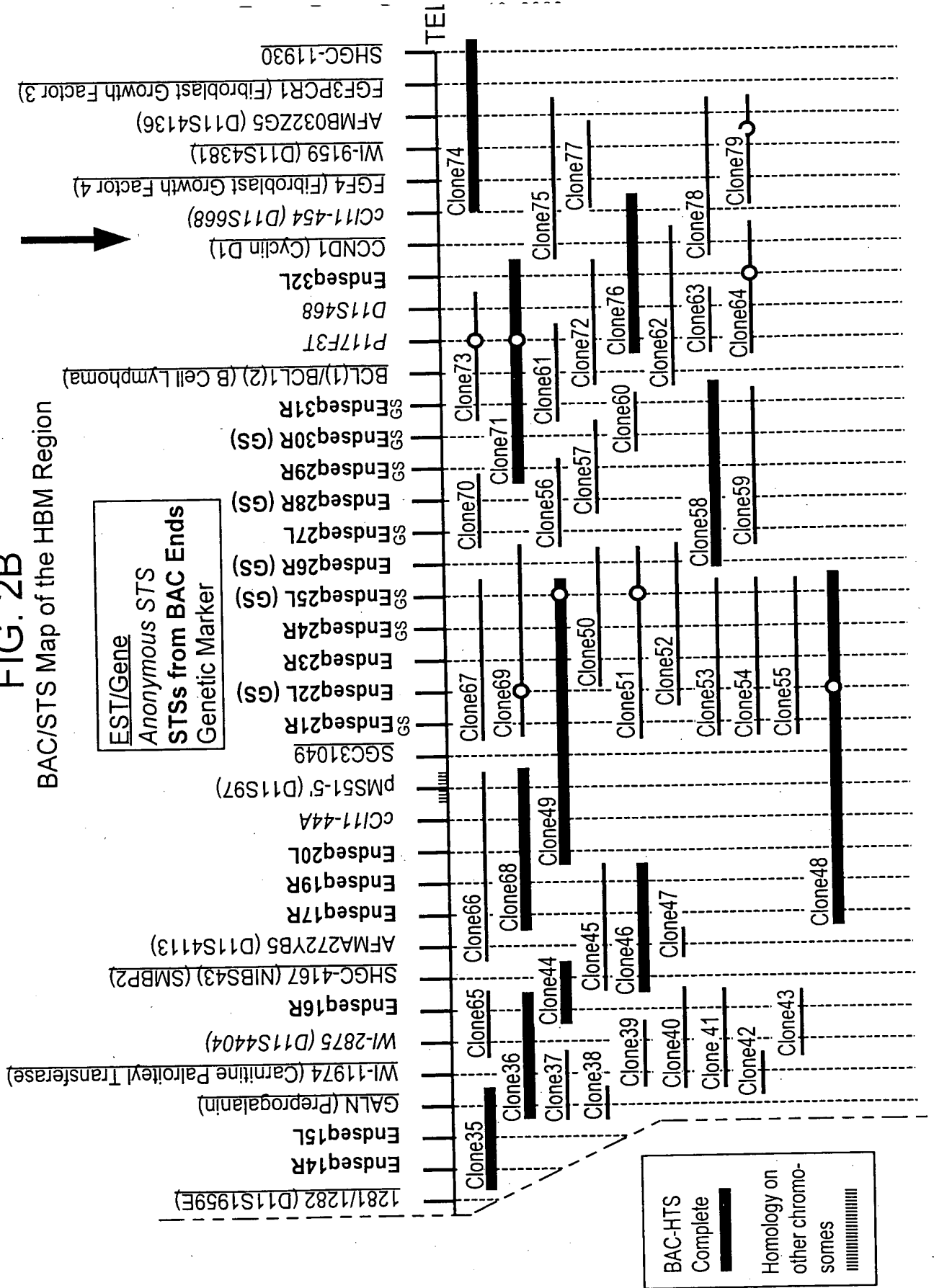


FIG. 2B
 BAC/STS Map of the HBM Region



Exon 1

ACTAAAGCGCCGCCGCCGCCATGGAGCCCCGAGTGAGCGCGGCGCG
GGCCCGTCCGGCCGCCGGACAACATGGAGGCAGCGCCGCCCGGGCCG
CCGTGGCCGCTGCTGCTGCTGCTGCTGCTGCTGCTGGCGCTGTGCGGC
TGCCCGGCCCCCGCCGCGGCC

Exon 2 Coordinates: 527d12_Contig308G 30944-30549

gccccacagCCTCGCCGCTCCTGCTATTTGCCAACC GCCGGGACGTACGGC
TGGTGGACGCCGGCGGAGTCAAGCTGGAGTCCACCATCGTGGTCAGC
GGCCTGGAGGATGCGGCCG CAGTGGACTTCCAGTTTCCAAGGGAGC
CGTGTACTGGACAGACGTGAGCGAGGAGGCCATCAAGCAGACCTACCT
GAACCAGACGGGGGGCCGCGGTGCAGAACGTGGTTCATCTCCGGCCTGG
TCTCTCCCGACGGCCTCGCCTGCGACTGGGTGGGCAAGAAGCTGTACT
GGACGGACTCAGAGACCAACCGCATCGAGGTGGCCAACCTCAATGGC
ACATCCCGGAAGGTGCTCTTCTGGCAGGACCTTGACCAGCCGAGGGCC
ATCGCCTTGGACCCCGCTCACGGgtaaaccctgctg

... 9408 nt ...

Exon 3 Coordinates: 527d12_Contig308G 21141-20945

ccccgtcacagGTACATGTACTGGACAGACTGGGGGTGAGACGCCCCGGATTG
AGCGGGGCAGGGATGGATGGCAGCACCCGGAAGATCATTGTGGACTCG
GACATTTACTGGCCCAATGGACTGACCATCGACCTGGAGGAGCAGAAG
CTCTACTGGGCTGACGCCAAGCTCAGCTTCATCCACCGTGCCAACCTG
GACGGCTCGTTCCGgtaggtacccac

... 6094 nt ...

Exon 4 Coordinates: 527d12_Contig308G 15047-14850

tccctgactgcagGCAGAAGGTGGTGGAGGGCAGCCTGACGCACCCCTTCGCC
CTGACGCTCTCCGGGGGACACTCTGTACTGGACAGACTGGCAGACCCGC
TCCATCCATGCCTGCAACAAGCGCACTGGGGGGGAAGAGGAAGGAGAT
CCTGAGTGCCCTATACTACCCATGGACATCCAGGTGCTGAGCCAGGA
GCGGCAGCCTTTCTgtgagtgccgg

... 1827 nt ...

Exon 5 Coordinates: 527d12_Contig308G 13220-13088

tttctcagTCCACACTCGCTGTGAGGAGGACAATGGCGGCTGCTCCACCTG
TGCCTGCTGTCCCAAGCGAGCCTTTCTACACATGCGCCTGCCCCACG
GGTGTGCAGCTGCAGGACAACGGCAGGACGTGTAAGGCAGgtgaggcggtgg
gacg

FIG. 3A

... 20923 nt ...

Exon 6 Coordinates: 527d12_Contig309G 7705-8100

ctccacagGAGCCGAGGAGGTGCTGCTGCTGGCCCCGGCGGACGGACCTAC
GGAGGATCTCGCTGGACACGCCGGAATTCACCGACATCGTGCTGCAGG
TGGACGACATCCGGCAGCCATTGCCATCGACTACGACCCGCTAGAGG
GCTATGTCTACTGGACAGATGACGAGGTGCGGGGCCATCCGCAGGGCG
TACCTGGACGGGTCTGGGGGCGCAGACGCTGGTCAACACCGAGATCAA
CGACCCCGATGGCATCGCGGTGACTGGGTGGCCCGAAACCTCTACTG
GACCGACACGGGCACGGACCGCATCGAGGTGACGCGCCTCAACGGCA
CCTCCCGCAAGATCCTGGTGTGCGGAGGACCTGGACGAGCCCCGAGCC
ATCGCACTGCACCCCGTGATGGGgtaagacgggc

..... 3211 nt

Exon 7 Coordinates: 527d12_Contig309G 11311-11482

ttcttctccagCCTCATGTACTGGACAGACTGGGGAGAGAACCCTAAAATCGA
GTGTGCCAACTTGGATGGGCAGGAGCGGCGTGTGCTGGTCAATGCCTC
CCTCGGGTGGCCCAACGGCCTGGCCCTGGACCTGCAGGAGGGGAAGC
TCTACTGGGGAGACGCCAAGACAGACAAGATCGAGgtgaggtcctgtgg

..... 13445 nt

Exon 8 Coordinates: 527d12_Contig309G 24927-25143

ccgtcctgcagGTGATCAATGTTGATGGGACGAAGAGGCGGACCCTCCTGGA
GGACAAGCTCCCGCACATTTTCGGGTTCACGCTGCTGGGGGACTTCAT
CTACTGGACTGACTGGCAGCGCCGACGATCGAGCGGGTGCACAAGG
TCAAGGCCAGCCGGGACGTCATCATTGACCAGCTGCCCCGACCTGATGG
GGCTCAAAGCTGTGAATGTGGCCAAGGTCGTGgtgagtcgggggggtc

....2826 nt

Exon 9 Coordinates: 527d12_Contig309G 27969-28256

gttcgcttccagGAACCAACCCGTGTGCGGACAGGAACGGGGGGGTGCAGCCA
CCTGTGCTTCTTCACACCCACGCAACCCGGTGTGGCTGCCCCATCGG
CCTGGAGCTGCTGAGTGACATGAAGACCTGCATCGTGCCTGAGGCCTT
CTTGGTCTTCACCAGCAGAGCCGCCATCCACAGGATCTCCCTCGAGAC
CAATAACAACGACGTGGCCATCCCGCTCACGGGCGTCAAGGAGGCCTC
AGCCCTGGACTTTGATGTGTCCAACAACCACATCTACTGGACAGACGT
CAGCCTGAAGgtagcgtgggc

.....3102.....

FIG. 3B

Exon 10 Coordinates: 527d12_Contig309G 31358-31582

cctgtgccagACCATCAGCCGCGCCTTCATGAACGGGAGCTCGGTGGAGCA
CGTGGTGGAGTTTGGCCTTGACTACCCCGAGGGCATGGCCGTTGACTG
GATGGGCAAGAACCTCTACTGGGCCGACACTGGGACCAACAGAATCGA
AGTGGCGCGGCTGGACGGGCAGTTCCGGCAAGTCCTCGTGTGGAGGG
ACTTGACAACCCGAGGTCGCTGGCCCTGGATCCCACCAAGGGgtaagtgt
tgcctgtc

.....1297 nt.....

Exon 11 Coordinates: 527d12_Contig309G 32879-33064

gtgccttcagCTACATCTACTGGACCGAGTGGGGCGGCAAGCCGAGGATCG
TGCGGGCCTTCATGGACGGGACCAACTGCATGACGCTGGTGGACAAG
GTGGGCCGGGCCAACGACCTCACCATTGACTACGCTGACCAGCGCCTC
TACTGGACCGACCTGGACACCAACATGATCGAGTCGTCCAACATGCTG
Ggtgaggcgccggct

.....2069 nt.....

Exon 12 Coordinates: 527d12_Contig309G 35133-35454

gtgttcagcagGTCAGGAGCGGGTCGTGATTGCCGACGATCTCCCGCACCCG
TTCGGTCTGACGCAGTACAGCGATTATATCTACTGGACAGACTGGAAT
CTGCACAGCATTGAGCGGGCCGACAAGACTAGCGGGCCGGAACCGCAC
CCTCATCCAGGGCCACCTGGACTTCGTGATGGACATCCTGGTGTTC
CTCCTCCCGCCAGGATGGCCTCAATGACTGTATGCACAACAACGGGCA
GTGTGGGCAGCTGTGCCTTGCCATCCCCGGCGGCCACCGCTGCGGCT
GCGCCTCACACTACACCCTGGACCCAGCAGCCGCAACTGCAGCCgtaag
tgcctcatgt

.....2006 nt.....

Exon 13 Coordinates: 527d12_Contig309G 37460-37659

gcctccttaCGCCCACCACCTTCTTGCTGTTTCAGCCAGAAATCTGCCATCAG
TCGGATGATCCCGGACGACCAGCACAGCCCGGATCTCATCCTGCCCCT
GCATGGACTGAGGAACGTCAAAGCCATCGACTATGACCCACTGGACAA
GTTTACTACTGGGTGGATGGGCGCCAGAACATCAAGCGAGCCAAGGA
CGACGGGACCCAGgcaggtgcctgtg

.....6965 nt.....

FIG. 3C

Exon 14 Coordinates: 527d12_Contig309G 44624-44832

ctttgtcttacagCCCTTTGTTTGGACCTCTCTGAGCCAAGGCCAAAACCCAGAC
AGGCAGCCCCACGACCTCAGCATCGACATCTACAGCCGGACACTGTTC
TGGACGTGCGAGGCCACCAATACCATCAACGTCCACAGGCTGAGCGG
GGAAGCCATGGGGGTGGTGCTGCGTGGGGACCGCGACAAGCCCAGGG
CCATCGTCGTCAACGCGGAGCGAGGgtaggaggccaac

.....1404 nt.....

Exon 15 Coordinates: 527d12_Contig309G 46236-46427

ccaccctccgcagGTACCTGTACTTCACCAACATGCAGGACCGGGCAGCCAA
GATCGAACGCGCAGCCCTGGACGGCACCAGCGCGAGGTCCTCTTCA
CCACCGGCCTCATCCGCCCTGTGGCCCTGGTGGTGGACAACACACTGG
GCAAGCTGTTCTGGGTGGACGCGGACCTGAAGCGCATTGAGAGCTGT
GACCTGTCAGgtacgcgccccgg

.....686 nt.....

Exon 16 Coordinates: 527d12_Contig309G 47113-47322

ggctgcttcagGGGCCAACCGCCTGACCCTGGAGGACGCCAACATCGTGCA
GCCTCTGGGCCTGACCATCCTTGGCAAGCATCTCTACTGGATCGACCG
CCAGCAGCAGATGATCGAGCGTGTGGAGAAGACCACCGGGGACAAGC
GGACTCGCATCCAGGGCCGTGTGCGCCACCTCACTGGCATCCATGCAG
TGGAGGAAGTCAGCCTGGAGGAGTTCTgtacgtgggggc

.....3884 nt.....

Exon 17 Coordinates: 527d12_Contig309G 51206-51331

ttgtctttgcagCAGCCCACCCATGTGCCCGTGACAATGGTGGCTGCTCCCACA
TCTGTATTGCCAAGGGTGATGGGACACCACGGTGCTCATGCCCAGTCC
ACCTCGTGCTCCTGCAGAACCTGCTGACCTGTGGAGgtaggtgtgacctaggtgc

....3905 nt.....

Exon 18 Coordinates: 527d12_Contig309G 55236-55472

gttctctctgtccctccccagAGCCGCCCACCTGCTCCCCGGACCAAGTTTGCATGT
GCCACAGGGGAGATCGACTGTATCCCCGGGGCCTGGCGCTGTGACGG
CTTTCCCGAGTGCGATGACCAGAGCGACGAGGAGGGGCTGCCCCGTGT
GCTCCGCGCCCGAGTTCCCCTGCGCGCGGGGTGAGTGTGTGGACCTGC
GCCTGCGCTGCGACGGCGAGGCAGACTGTCAGGACCGCTCAGACGAG
GTGGACTGTGACGgtgaggccctcc

.....3052 nt.....

FIG. 3D

Exon 19 Coordinates: 527d12_Contig309G 58524-58634

tctccttgccagCCATCTGCCCTGCCCAACCAGTTCCGGTGTGCGAGCGGCCAGT
GTGTCCTCATCAAACAGCAGTGC GACTCCTTCCCCGACTGTATCGACG
GCTCCGACGAGCTCATGTGTGgtgagccagctt

.....1448 nt.....

Exon 20 Coordinates: 527d12_Contig309G 60082-60319

gtttgtctctggcagAAATCACCAAGCCGCCCTCAGACGACAGCCCGGCCCA
GCAGTGCCATCGGGCCCGTCATTGGCATCATCCTCTCTCTCTTCGTCAT
GGGTGGTGTCTATTTTGTGTGCCAGCGCGTGGTGTGCCAGCGCTATGC
GGGGGCCAACGGGGCCCTTCCCGCACGAGTATGTCAGCGGGACCCCGC
ACGTGCCCCCTCAATTTTCATAGCCCCGGGCGGTTCCAGCATGGCCCCCT
TCACAGgtaaggagcctgagatatggaa

....1095 nt.....

Exon 21 Coordinates: 527d12_Contig309G 61414-61552

cttccttgccagGCATCGCATGCGGAAAGTCCATGATGAGCTCCGTGAGCCTG
ATGGGGGGCCGGGGCGGGGTGCCCTCTACGACCGGAACACGTCAC
AGGGGCCTCGTCCAGCAGCTCGTCCAGCACGAAGGCCACGCTGTACCC
GCCGgtgaggggcggg

.....6513 nt.....

Exon 22 Coordinates: 527d12_Contig309G 68065-68162

ttgctctcctcagATCCTGAACCCGCCGCCCTCCCCGGCCACGGACCCCTCCC
TGTACAACATGGACATGTTCTACTCTTCAAACATTCCGGCCACTGCGA
GACCGTACAGgtaggacatcccctgcag

.....2273 nt.....

FIG. 3E

Exon 23 Coordinates: 527d12_Contig309G 70435-70901

tcaaacattccggccactgcgagaccgtacagGCCCTACATCATTCGAGGAATGGCGCCCC
CGACGACGCCCTGCAGCACCGACGTGTGTGACAGCGACTACAGCGCC
AGCCGCTGGAAGGCCAGCAAGTACTACCTGGATTTGAACTCGGACTCA
GACCCCTATCCACCCCCACCCACGCCCCACAGCCAGTACCTGTTCGGCG
GAGGACAGCTGCCCCGCCCTCGCCCCGCCACCGAGAGGAGCTACTTCCAT
CTCTTCCCGCCCCCTCCGTCCCCCTGCACGGACTCATCCTGACCTCGGC
CGGGCCACTCTGGCTTCTCTGTGCCCTGTAAATAGTTTAAATATGAACAA
AGAAAAAATATATTTTATGATTTAAAAAATAAATATAATTGGGATTTTAA
AAACATGAGAAATGTGAACTGTGATGGGGTGGGCAGGGCTGGGAGAACTT
TGTACAGTGGAGAAATATTTATAAACTTAATTTTGTAACA

FIG. 3F

Model for a LDL Receptor-Related protein, Zmax1

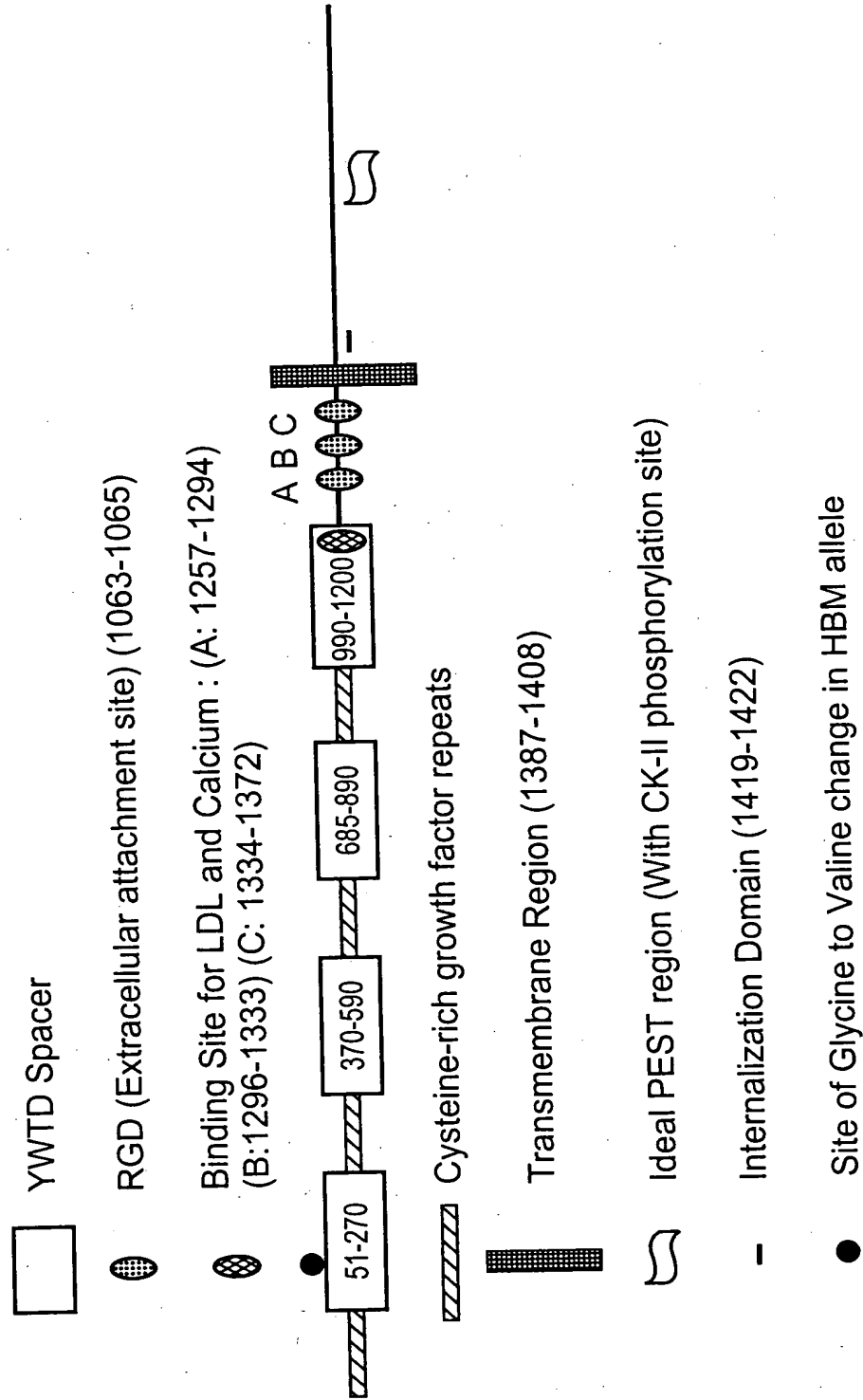


FIG. 4

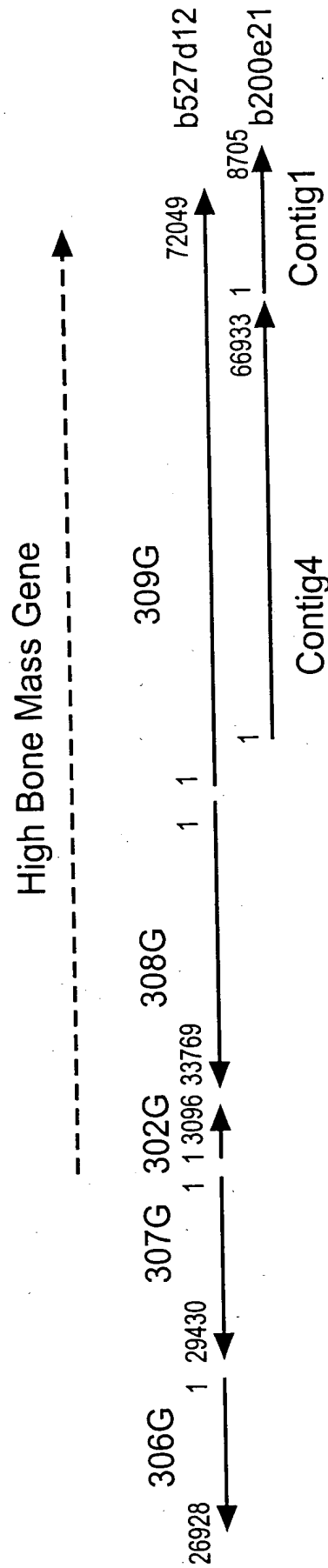


FIG. 5

FIG. 6A

1	ACTAAGCGCGCGCCATGGAGCCGAGTGAGCGCGCGCGCGCGCGCCGCTCCGGCC	60
61	GCCGACAAACATGGAGCGCGCGCGCGCGCGCGCGCGCGCGCGCTGCTGCTGCTGCT	120
1	M E A A P P G P P W P L L L L L L L	17
121	GCTGCTGCTGCGGCTGTGCGGCTGCCCGCGCGCGCGCGCGCGCGCTCCTGCTATT	180
18	L L L A L C G C P A P A A A S P L L L F	37
181	TGCCAACCGCGGACGTACGGCTGTGTGACCGCGCGGAGTCAAGCTGGAGTCCACCAT	240
38	A N R R D V R L V D A G G V K L E S T I	57
241	CGTGGTCAGCGGCGCTGGAGGATGCGGCGCGAGTGACTTCCAGTTTCCAGGAGCCGT	300
58	V V S G L E D A A A V D F Q F S K G A V	77
301	GTA CTGGACAGACGTGAGCGAGGAGGCCATCAAGCAGACCTACTGAACACGCGGGGC	360
78	Y W T D V S E E A I K Q T Y L N Q T G A	97
361	CGCCGTGCAGAACGTGGTCATCTCCGGCGCTGGTCTCTCCGACGGCCTCGCCTGCGACTG	420
98	A V Q N V V I S G L V S P D G L A C D W	117
421	GGTGGCAAGAGCTGTACTGGACGGA CTGAGAGACCAACCGCATCGAGTGGCCAACCT	480
118	V G K K L Y W T D S E T N R I E V A N L	137
481	CAATGGCACATCCCGAAGGTGCTCTTTCTGGCAGGACCTTGACCAGCCGAGGGCCATCGC	540
138	N G T S R K V L F W Q D L D Q P R A I A	157
541	CTTGACCCCGCTACGGGTACATGTACTGGACAGACTGGGGTGAGACGCCCGGATTGA	600
158	L D P A H G Y M Y W T D W G E T P R I E	177

601	GCGGCAGGATGGATGGCAGCACCCGGAAGATCATTTGTGACTCGGACATTTACTGGCC	660
178	R A G M D G S T R K I I V D S D I Y W P	197
661	CAATGGACTGACCATCGACCTGGAGGAGCAGAAGCTCTACTGGGCTGACGCCAAGCTCAG	720
198	N G L T I D L E E Q K L Y W A D A K L S	217
721	CTTCATCCACCGTGCCAACCTGGACGGCTCGTTCCGGCAGAAGTGTGTGAGGGCAGCCT	780
218	F I H R A N L D G S F R Q K V V E G S L	237
781	GACGCACCCCTTCGCCCTGACGCTCTCCGGGACACTCTGTACTGGACAGACTGGCAGAC	840
238	T H P F A L T L S G D T L Y W T D W Q T	257
841	CCGCTCCATCCATGCCTGCAACAAGCGCACTGGGGGAAGAGAGATCCTGAGTGC	900
258	R S I H A C N K R T G G K R K E I L S A	277
901	CCTCTACTACCCATGGACATCCAGGTGCTGAGCCAGGCGGACGCTTCTTCCACAC	960
278	L Y S P M D I Q V L S Q E R Q P F F H T	297
961	TCGCTGTGAGGAGACAATGGGGCTGCTCCCCACCTGTGCTGTCCCCAAGCGAGCC	1020
298	R C E E D N G G C S H L C L L S P S E P	317
1021	TTTTCTACACATGCGCCTGCCCCACGGGTGTGCAGCTGCAGGACAACGGCAGGACGTGTAA	1080
318	F Y T C A C P T G V Q L Q D N G R T C K	337
1081	GGCAGGAGCGGAGGTGCTGTCTGTGGCCCGGCGGACCGACCTACGGAGGATCTCGCT	1140
338	A G A E E V L L L A R R T D L R R I S L	357

FIG. 6C

1141 GGACACGCCGGACTTACCGACATCGTGTGACGAGTGGACGACATCCGGCAGCCATTGC 1200
358 D T P D F T D I V L Q V D D I R H A I A 377
1201 CATCGACTACGACCCGCTAGAGGGCTATGTCTACTGGACAGATGACGAGGTGCGGGCCAT 1260
378 I D Y D P L E G Y V Y W T D D E V R A I 397
1261 CCGCAGGGCGTACCTGGACGGGTCTGGGGCGCAGACGCTGGTCAACACCGAGATCAACGA 1320
398 R R A Y L D G S G A Q T L V N T E I N D 417
1321 CCCCAGTGGCATCGCGGTGCGACTGGTGGCCCGAACTCTACTGGACCGACACGGGCAC 1380
418 P D G I A V D W V A R N L Y W T D T G T 437
1381 GGACCGCATCGAGGTGACCGCGCTCAACGGCACCTCCCGCAAGATCCTGGTGTGGAGGA 1440
438 D R I E V T R L N G T S R K I L V S E D 457
1441 CCTGGACGAGCCCCGAGCCATCGCACTGCACCCCGTGATGGCCCTCATGTACTGGACAGA 1500
458 L D E P R A I A L H P V M G L M Y W T D 477
1501 CTGGGAGAGAACCTAAATCGAGTGTGCCAACTTGGATGGCAGGAGCGCGTGTGCT 1560
478 W G E N P K I E C A N L D G Q E R R V L 497
1561 GGTCAATGCCCTCCCTCGGGTGGCCCAACGGCCCTGGCCCTGACCTGCAGGAGGGAAGCT 1620
498 V N A S L G W P N G L A L D L Q E G K L 517
1621 CTA CTGGGAGACGCCAAGACAGACAAGATCGAGGTGATCAATGTTGATGGACGAAGAG 1680
518 Y W G D A K T D K I E V I N V D G T K R 537

FIG. 6D

1681	GCGGACCCCTCCTGGAGGACAAGCTCCCGCACATTTTCGGGTTACGGCTGCTGGGGACTT	1740
538	R T L L E D K L P H I F G F T L L G D F	557
1741	CATCTACTGGACTGACTGGCAGCGCCGCGAGCATCGAGCGGGTGCAAGTCAAGGCCAG	1800
558	I Y W T D W Q R R S I E R V H K V K A S	577
1801	CCGGACGTCATCATTGACCAGCTGCCCGACCTGATGGGGCTCAAAGCTGTGAATGTGGC	1860
578	R D V I I D Q L P D L M G L K A V N V A	597
1861	CAAGGTCGTCGGAACCAACCGTGTGCGGACAGGAACGGGGGTGCAGCCACCTGTGCTT	1920
598	K V V G T N P C A D R N G G C S H L C F	617
1921	CTTCACACCCACGCAACCCGGTGTGGTGCCCGCCATCGGCCCTGGAGCTGCTGAGTGACAT	1980
618	F T P H A T R C G C P I G L E L L S D M	637
1981	GAAGACCTGCATCGTGCCTGAGGCCTTCTTGGTCTTCACCAGCAGAGCCGCCATCCACAG	2040
638	K T C I V P E A F L V F T S R A A I H R	657
2041	GATCTCCCTCGAGACCAATAACAACGACGTGGCCATCCCGCTCACGGCGCTCAAGGAGGC	2100
658	I S L E T N N N D V A I P L T G V K E A	677
2101	CTCAGCCCTGGACTTTGATGTGTCCAAACCAACACATCTACTGGACAGACGTGAGCTTGAA	2160
678	S A L D F D V S N N H I Y W T D V S L K	697
2161	GACCATCAGCCGCGCCTTCATGAACGGGAGCTCGGTGGAGCACGTGGTGGAGTTTGGCCT	2220
698	T I S R A F M N G S S V E H V V E F G L	717

FIG. 6E

2221	TGACTACCCGAGGCAATGCGCGTTGACTGGATGGGCAAGAACCTCTACTGGGCCGACAC	2280
718	D Y P E G M A V D W M G K N L Y W A D T	737
2281	TGGGACCAACAGAATCGAAGTGGCGGCTGGACGGCAGTTCGGGCAAGTCCCTCGTGTG	2340
738	G T N R I E V A R L D G Q F R Q V L V W	757
2341	GAGGACTTGGACAACCCGAGGTCGCTGGCCCTGGATCCACCAAGGCTACATCTACTG	2400
758	R D L D N P R S L A L D P T K G Y I Y W	777
2401	GACCGAGTGGGGCGGCAAGCCGAGGATCGTGGCGGCCCTTCATGACGGGACCAACTGCAT	2460
778	T E W G G K P R I V R A F M D G T N C M	797
2461	GACGCTGGTGGAAGGTGGGGCGGCGCAACGACCTCACCATTGACTACGCTGACCAGCG	2520
798	T L V D K V G R A N D L T I D Y A D Q R	817
2521	CCTCTACTGGACCGACCTGGACACCAACATGATCGAGTCGTCCAAACATGCTGGTCAAGGA	2580
818	L Y W T D L D T N M I E S S N M L G Q E	837
2581	GCGGGTCGTGATTGCCGACGATCTCCCGACCCGTTCCGGTCTGACGCAGTACAGCGATTA	2640
838	R V V I A D D L P H P F G L T Q Y S D Y	857
2641	TATCTACTGGACAGACTGGAATCTGCACAGCATTGAGCGGGCGGCAAGACTAGCGGCCG	2700
858	I Y W T D W N L H S I E R A D K T S G R	877
2701	GAACCGCACCCCTCATCCAGGGCCACCTGGACTTCGTGATGGACATCCTGGTGTTCCTC	2760
878	N R T L I Q G H L D F V M D I L V F H S	897

FIG. 6F

2761	CTCCCGCCAGGATGGCCCTCAATGACTGTATGCACAACGGGAGTGTGGCAGCTGTG	2820
898	S R Q D G L N D C M H N N G Q C G Q L C	917
2821	CCTTGCCATCCCCGGCGGCCACCGCTGCGGCTGCGCCTCACACTACACCTGGACCCAG	2880
918	L A I P G G H R C G C A S H Y T L D P S	937
2881	CAGCCGCAACTGCAGCCCGCCACCCACCTTCTTGCTGTTCAGCCAGAAATCTGCCATCAG	2940
938	S R N C S P P T T F L L F S Q K S A I S	957
2941	TCGGATGATCCCGGACGACGACGACAGCCCGGATCTCATCTGCCCCCTGCATGACTGAG	3000
958	R M I P D D Q H S P D L I L P L H G L R	977
3001	GAACGTCAAAGCCATCGACTATGACCCACTGGACAAAGTTTCATCTACTGGTGGATGGCG	3060
978	N V K A I D Y D P L D K F I Y W V D G R	997
3061	CCAGAACATCAAGCGAGCCAAGGACGACGGGACCCAGCCCTTTGTTTGTGACCTCTCTGAG	3120
998	Q N I K R A K D D G T Q P F V L T S L S	1017
3121	CCAAGGCCAAAACCCAGACGAGCAGCCACGACCTCAGCATCGACATCTACAGCCGGAC	3180
1018	Q G Q N P D R Q P H D L S I D I Y S R T	1037
3181	ACTGTTCTGGACGTGCGAGGCCACCAATACCATCAACGTCCACAGGCTGAGCGGGAAGC	3240
1038	L F W T C E A T N T I N V H R L S G E A	1057
3241	CATGGGGTGGTGGTGGGACCCGACAAAGCCAGGCCATCGTCGTCAACCGGGA	3300
1058	M G V V L R G D R D K P R A I V V N A E	1077

FIG. 6G

3301	GCGAGGTACCTGTACTTACCAACATGCAGACCGGGCAGCCAAAGATCGAACGCGCAGC	3360
1078	R G Y L Y F T N M Q D R A A K I E R A A	1097
3361	CCTGGACGGCACCGAGCGGAGGTCCCTTTCACCAACCGGCCCTCATCCGCCCTGTGGCCCT	3420
1098	L D G T E R E V L F T T G L I R P V A L	1117
3421	GGTGGTGACAAACACACTGGGCAAGCTGTTCTGGTGGACGGGACCTGAAGCGCATTGA	3480
1118	V V D N T L G K L F W V D A D L K R I E	1137
3481	GAGCTGTGACCTGTGAGGGGCCAACCGCCTGACCCCTGGAGGACGCCAACATCGTGCAGCC	3540
1138	S C D L S G A N R L T L E D A N I V Q P	1157
3541	TCTGGGCTGACCATCCTTGGCAAGCATCTCTACTGGATCGACCGCCAGCAGCAGATGAT	3600
1158	L G L T I L G K H L Y W I D R Q Q M I	1177
3601	CGAGCGTGTGGAGAAGACACCGGGGACAAGCGGACTCGCATCCAGGGCCGTGTCGCCCA	3660
1178	E R V E K T T G D K R T R I Q G R V A H	1197
3661	CCTCACTGGCATCCATGCAGTGGAGGAAGTCAGCCCTGGAGGAGTTCTCAGCCCAACCCATG	3720
1198	L T G I H A V E E V S L E E F S A H P C	1217
3721	TGCCCCGTGACAAATGGTGGCTGCTCCACATCTGTATTGCCAAGGGTGATGGACACCCAG	3780
1218	A R D N G G C S H I C I A K G D G T P R	1237
3781	GTGCTCATGCCCAGTCCACCTCGTGTCTCTGAGAACCTGCTGACCTGTGGAGAGCCGCC	3840
1238	C S C P V H L V L L Q N L L T C G E P P	1257

FIG. 6H

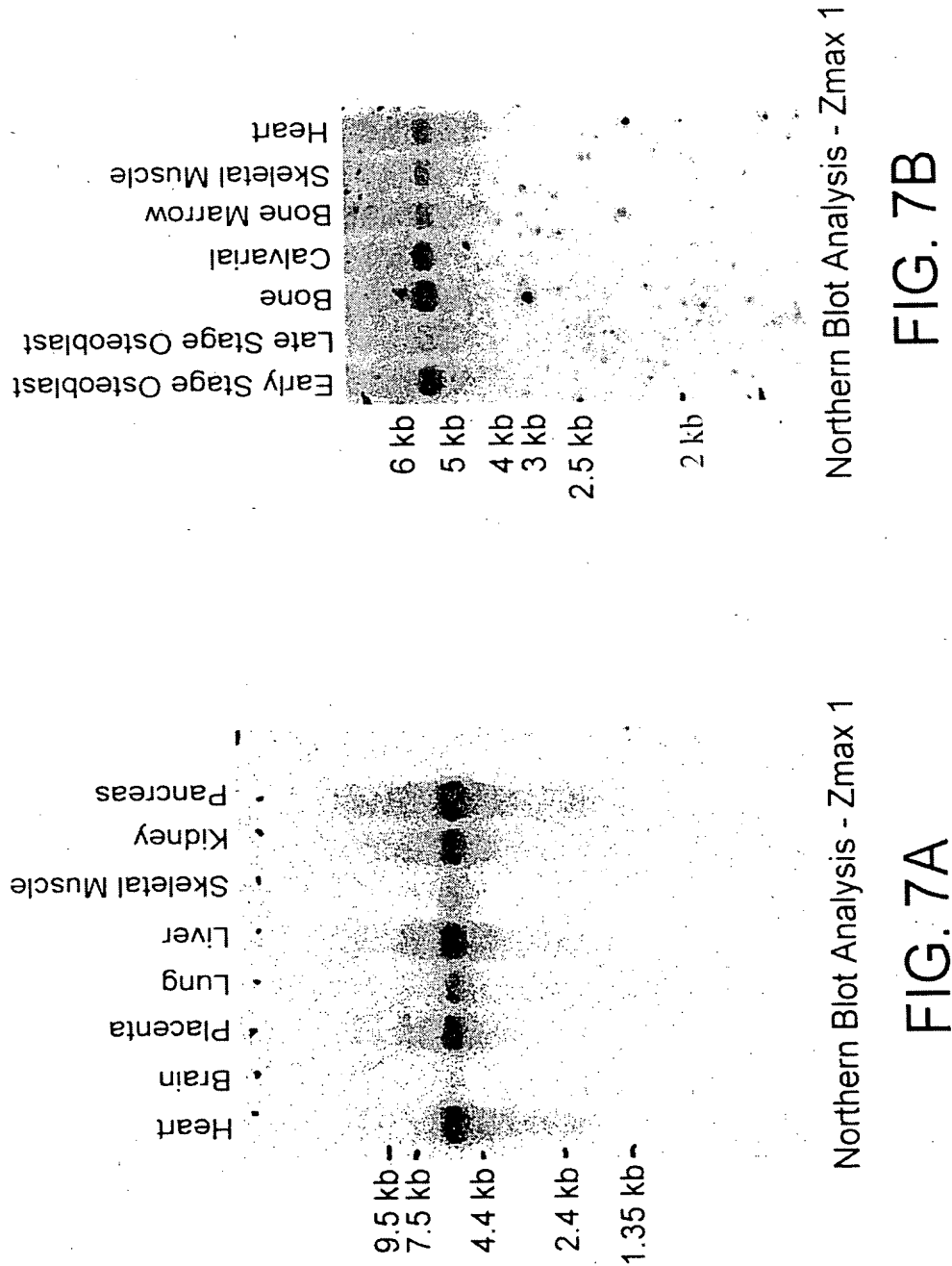
3841	CACCTGCTCCCCGACCAAGTTTGATGTGCCACAGGGAGATCGACTGTATCCCCGGGGC	3900
1258	T C S P D Q F A C A T G E I D C I P G A	1277
3901	CTGGCGCTGTGACGGCTTTCCTGAGTCCGATGACACAGACGAGGAGGGCTGCCCCGT	3960
1278	W R C D G F P E C D D Q S D E E G C P V	1297
3961	GTGCTCCGCCGCCAGTTCCCTGCGCGGGGTCAAGTGTGTGGACCTGCGCCTGCGCTG	4020
1298	C S A A Q F P C A R G Q C V D L R L R C	1317
4021	CGACGGCAGGACACTGTACGAGCCGCTCAGACGAGGTGGACTGTGACGCCATCTGCCT	4080
1318	D G E A D C Q D R S D E V D C D A I C L	1337
4081	GCCCAACCAAGTTCCGGTGTGCGAGCGGCCAGTGTGTCTCTCATCAACACAGCAGTGC	4140
1338	P N Q F R C A S G Q C V L I K Q Q C D S	1357
4141	CTTCCCCGACTGTATCGACGGCTCCGACGAGCTCATGTGTGAAATCACCAGCCGCCCTC	4200
1358	F P D C I D G S D E L M C E I T K P P S	1377
4201	AGACGACAGCCCGCCACAGCAGTGCCATCGGGCCCGTCAATTGGCATCATCCTCTCTCT	4260
1378	D D S P A H S S A I G P V I G I I L S L	1397
4261	CTTCGTATGGGTGTCTATTTTGTGTGCCAGCGCGTGGTGTGCCAGCGCTATGCGGG	4320
1398	F V M G G V Y F V C Q R V V C Q R Y A G	1417
4321	GGCCAAACGGGCCCTTCCCCGACGAGTATGTACGGGACCCCGCACGTGCCCTCAATT	4380
1418	A N G P F P H E Y V S G T P H V P L N F	1437

FIG. 6I

4381	CATAGCCCGGGCGGTTCCAGCATGGCCCCCTTCACAGGCATCGCATGCGGAAAGTCCAT	4440
1438	I A P G G S Q H G P F T G I A C G K S M	1457
4441	GATGAGCTCCGTGAGCCTGATGGGGCGGGCGGGGTGCCCTCTACGACCGGAACCA	4500
1458	M S S V S L M G G R G G V P L Y D R N H	1477
4501	CGTCACAGGGCCCTCGTCCAGCAGCTCGTCCAGCACGAAGCCACGCTGTACCCGCCGAT	4560
1478	V T G A S S S S S S T K A T L Y P P I	1497
4561	CCTGAACCCCGGCCCTCCCCGGCCACGGACCCCTCCCTGTACAACATGGACATGTTCTA	4620
1498	L N P P P S P A T D P S L Y N M D M F Y	1517
4621	CTCTTCAAACATTCCGGCCCACTGCGAGACCGTACAGGCCCTACATCATTCGAGGAATGGC	4680
1518	S S N I P A T A R P Y R P Y I I R G M A	1537
4681	GCCCCGACGACGCCCTGCAGCACCGACCGTGTGTGACAGCGACTACAGCGCCAGCCGCTG	4740
1538	P P T T P C S T D V C D S D Y S A S R W	1557
4741	GAAGGCCAGCAAGTACTACTGTGATTGAACTCGGACTCAGACCCCTATCCACCCCCACC	4800
1558	K A S K Y Y L D L N S D S D P Y P P P	1577
4801	CACGCCCCACAGCCAGTACTGTGCGGGGAGGACAGCTGCCCGCCCTCGCCCGCCACCGA	4860
1578	T P H S Q Y L S A E D S C P P S P A T E	1597
4861	GAGGAGCTACTTCCATCTTCCCCCCCCCTCCGTCCCCCTGCACGGACTCATCTTGACC	4920
1598	R S Y F H L F P P P P S P C T D S S	1615

FIG. 6J

4921	TCGGCCGGCCACTCTGGCTTCTCTGTGCCCCCTGTAAATAGTTTAAATATGAACAAAGA	4980
4981	AAAAAATATATTTTATGATTTAAAAAATAAATAAATTGGGATTTTAAAAACATGAGAAA	5040
5041	TGTGAACCTGTGATGGGTGGCAGGGCTGGGAGAACTTTGTACAGTGGAGAAATATTTAT	5100
5101	AAACTTAATTTTGTAAACA	5120



Zmax 1 random samples

b527d12-h_Contig087C_1.nt

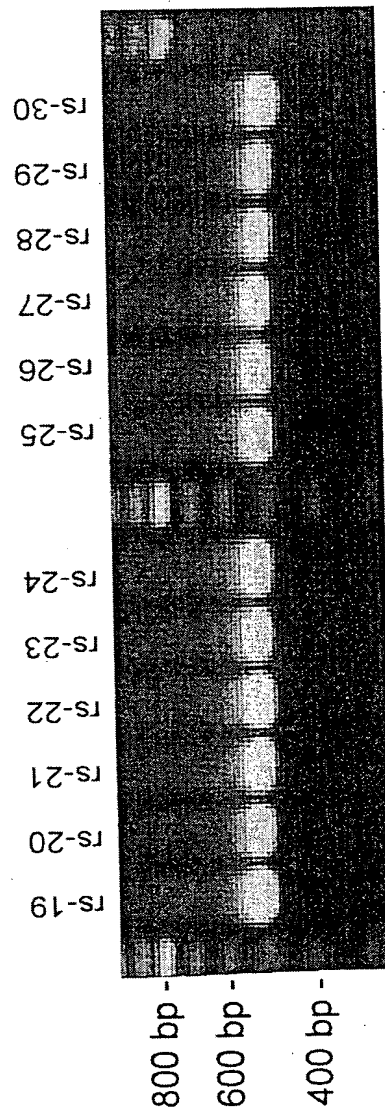


FIG. 8

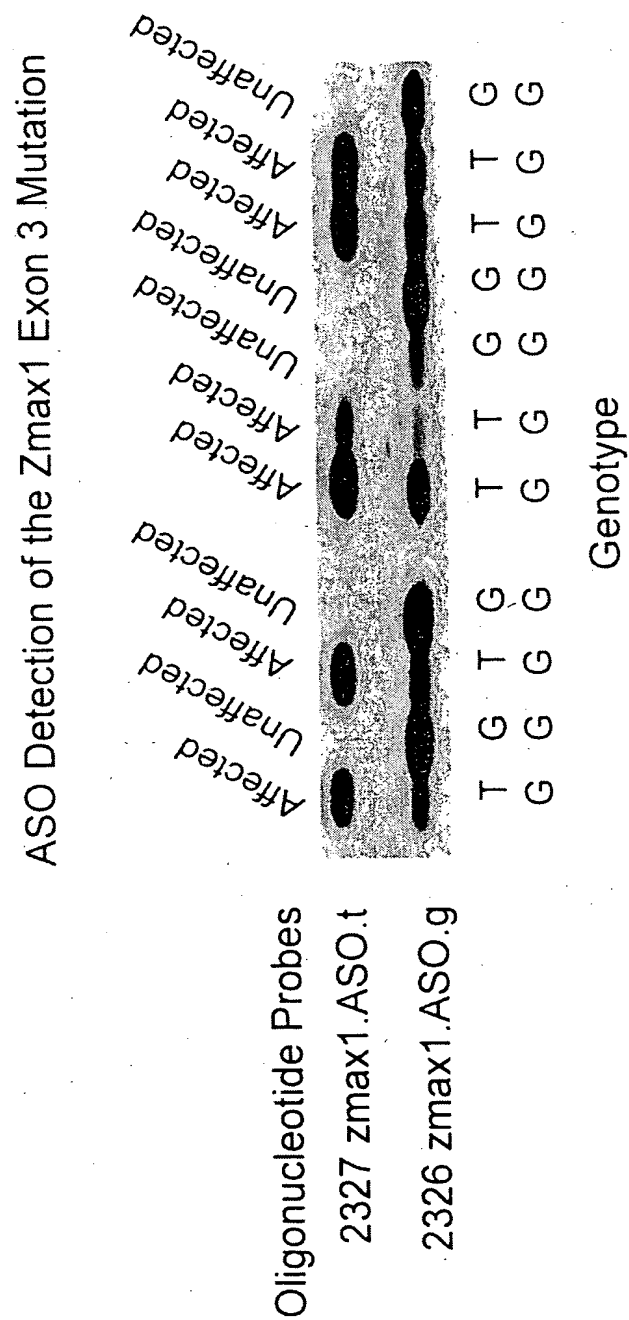


FIG. 9

Mouse Zmax1 In situ hybridization
100X Magnification

Antisense probe

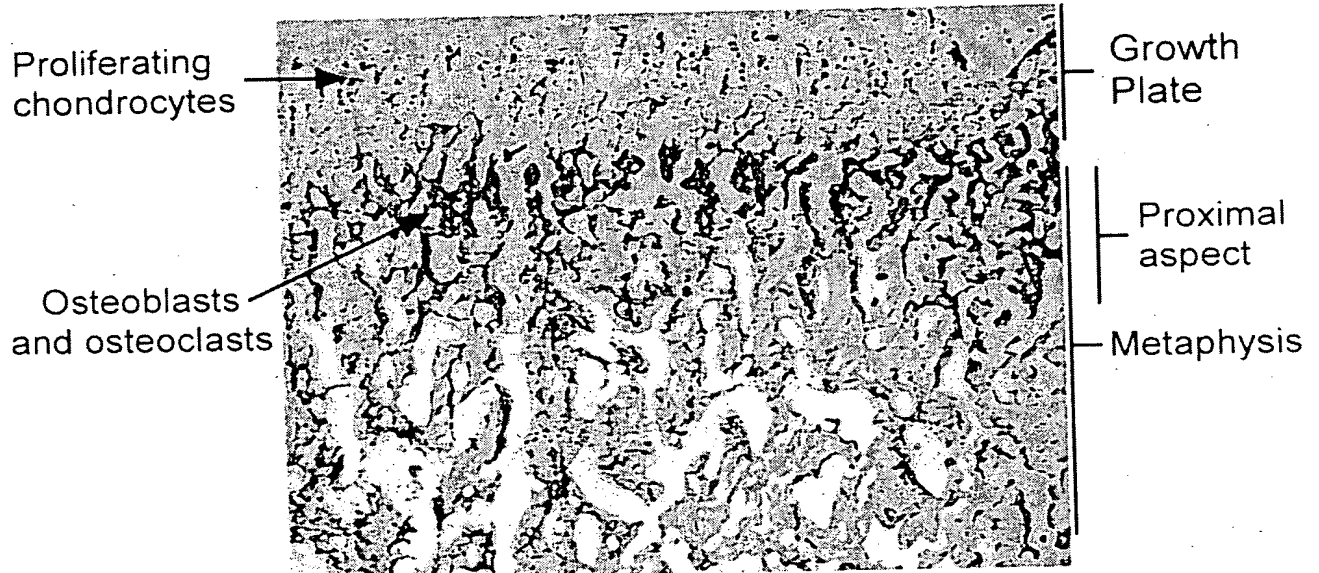


FIG. 10A

Mouse Zmax1 In situ hybridization
100X Magnification

Sense probe

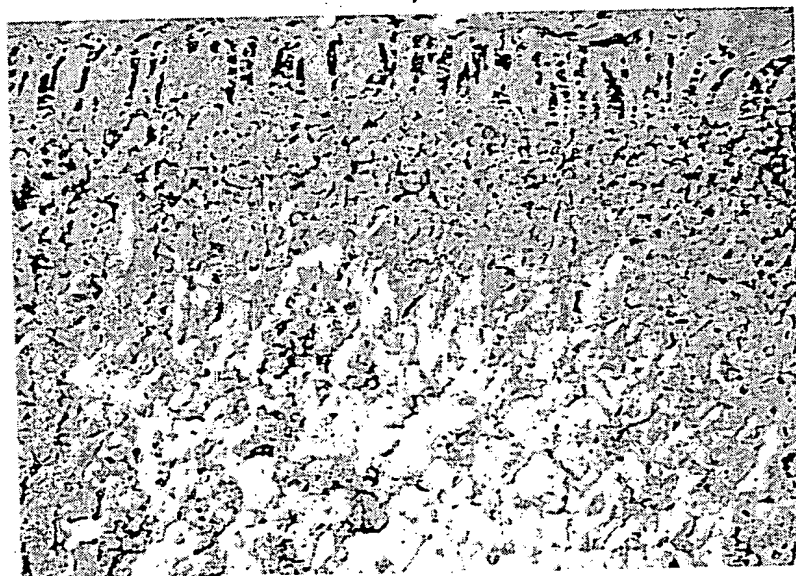


FIG. 10B

Mouse Zmax1 In situ hybridization
400X Magnification
Antisense probe

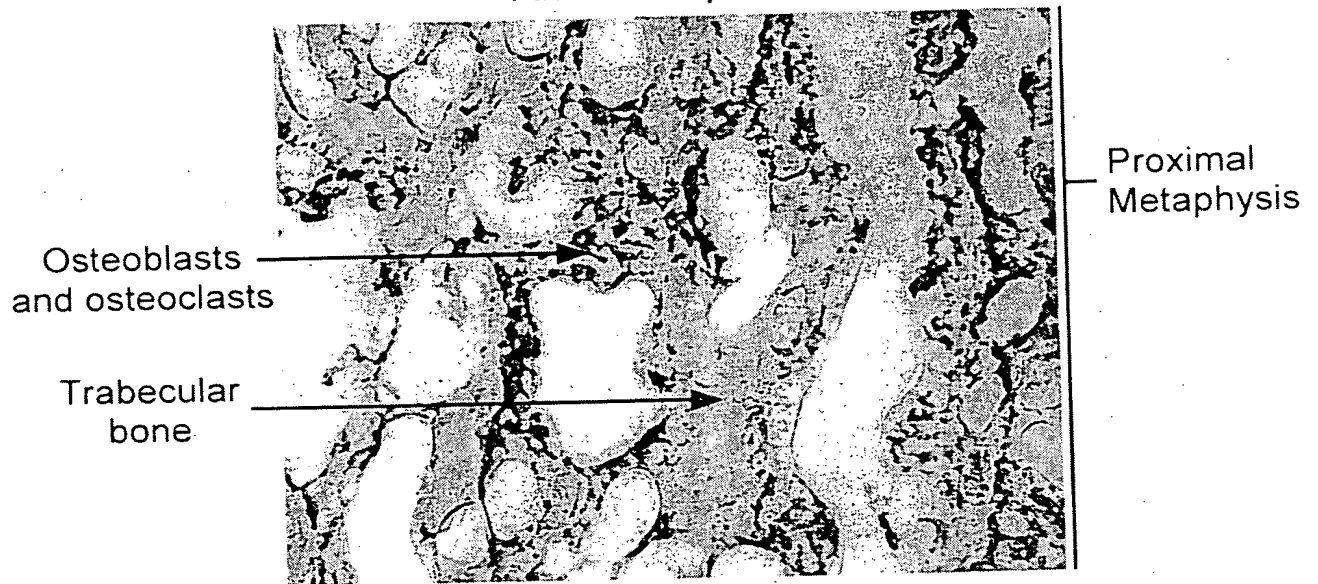


FIG. 11A

Mouse Zmax1 In situ hybridization
400X Magnification
Sense probe

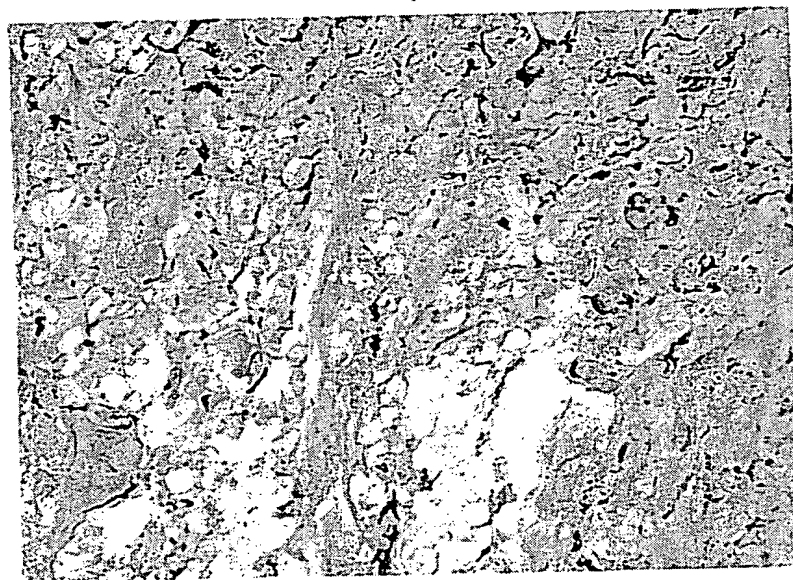


FIG. 11B

Mouse Zmax1 In situ hybridization
400X Magnification
Antisense probe



FIG. 12A

Mouse Zmax1 In situ hybridization
400X Magnification
Sense probe

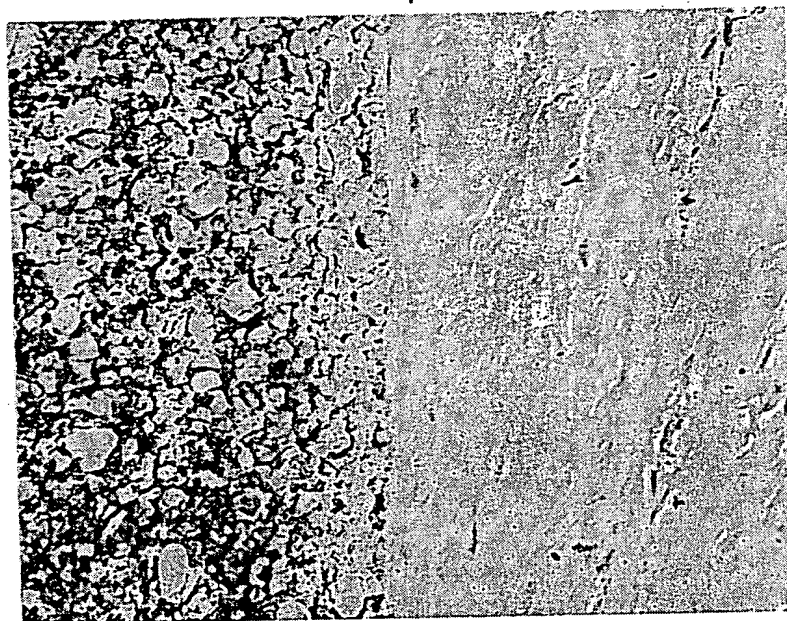
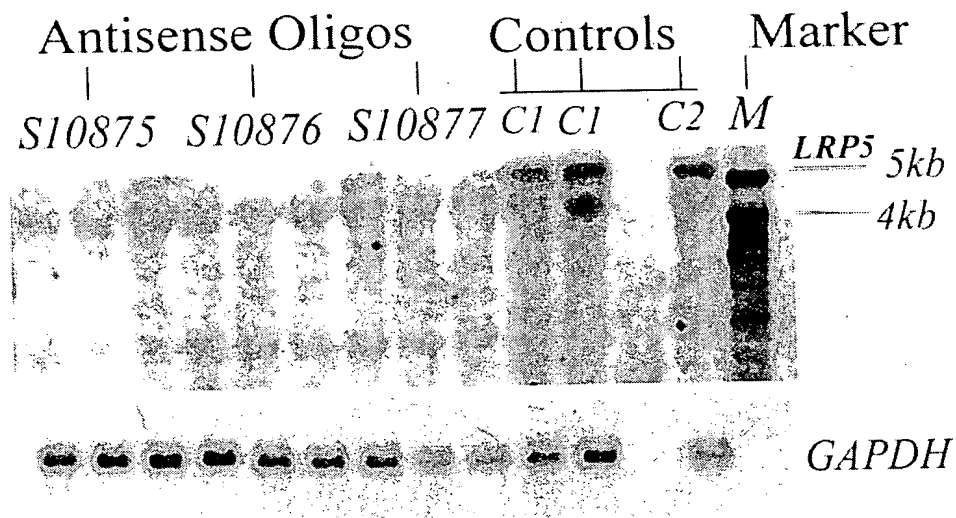


FIG. 12B

Antisense Inhibition of Zmax1 Expression



MC-3T3 cells

FIG. 13